California State Auditor

BUREAU OF STATE AUDITS

Department of Health Services:

Additional Improvements Are Needed to Ensure Children Are Adequately Protected From Lead Poisoning

May 2001
2000-013

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May 1, 2001 2000-013

The Governor of California
President pro Tempore of the Senate
Speaker of the Assembly
State Capitol
Sacramento, California 95814

Dear Governor and Legislative Leaders:

As required by Chapter 540, Statutes of 2000, the Bureau of State Audits presents its audit report concerning the progress made by the Department of Health Services' (department) Childhood Lead Poisoning Prevention Program in identifying and protecting children with lead poisoning.

This report concludes that the department has only made limited progress in fulfilling its most critical missions related to lead poisoning and has not fully implemented all of our previous recommendations. Currently, the department does not ensure that all those children it has identified with lead poisoning receive proper medical care and are protected from further exposure. Also, it is still unable to determine the full nature and extent of lead poisoning in California because laboratories are not required to report the results of all childhood blood lead-tests. To its credit, the department has recently established a required standard of care for identifying lead-poisoned children, but lacks a plan to monitor and enforce this standard. Further, the department has been unsuccessful in its efforts to strengthen statewide enforcement authority to reduce or eliminate identified lead hazards. Although it has improved its outreach and education efforts, the department has yet to finalize its state plan for educating health care providers. Finally, the department needs to address current staffing shortages and projected funding shortfalls to avoid potential cutbacks in program operations that may further hamper its ability to adequately protect California's children from lead poisoning.

Respectfully submitted,

Elaine M. Howle

ELAINE M. HOWLE
State Auditor

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SUMMARY

Audit Highlights . . .

Our follow-up audit of the Childhood Lead Poisoning Prevention Program (program) revealed that the Department of Health Services (department) made only limited progress in implementing our recommendations. As a result, the department still:

- ☑ *Does not ensure California's children identified with lead poisoning receive the proper medical care and are protected from further exposure.*
- ☑ *Is unable to determine the full extent of lead poisoning in California—having identified only about 10 percent of the estimated 38,000 children needing services.*
- ☑ *Lacks the enforcement authority needed to reduce or eliminate lead hazards.*

Additionally, the department needs to address staffing shortages and projected funding shortfalls to avoid potential cutbacks in program operations.

RESULTS IN BRIEF

When children under the age of 6 are exposed to lead, a highly toxic metal, the consequences can be very serious. Childhood lead poisoning can interfere with the development of the brain, organs, and nervous system; even relatively small amounts of lead in blood can result in learning disabilities, behavioral problems, and lower IQ scores. Although childhood lead poisoning is completely preventable, according to the Department of Health Services (department), it is the most common environmental health problem affecting California's children. Nationwide blood-lead levels have been declining in recent years, but many children throughout the country still suffer from lead poisoning.

For more than a decade, California has struggled to identify and protect its lead-poisoned children. As early as 1986, the Legislature charged the department with determining the extent of lead poisoning among children in the State. In 1991 the Legislature set specific goals for protecting children from lead poisoning. It asked the department to evaluate all children for their risk of poisoning, to test those children who were at risk, and to provide case management for children who were found to suffer from lead poisoning. To date, the department has been unsuccessful in meeting these goals.

As a result of the department's difficulty in meeting its goals, thousands of lead-poisoned children may have been allowed to suffer needlessly. The department itself estimates that approximately 128,000 children between the ages of 1 and 5 have elevated blood-lead levels, with 38,000 having levels that would warrant case management, which entails coordinating needed medical, social, educational, and environmental services. Yet, as of January 2001, the department reported that it was providing case management to a mere 3,700 children—the only lead-poisoned children at that time whom it had identified as requiring these services. Thus, the department is clearly not fulfilling its responsibilities as mandated by the Legislature.

In April 1999 the Bureau of State Audits (bureau) issued a report concluding that the department had made little progress in protecting California's children from lead poisoning. Because that report raised significant issues, the Legislature felt that a follow-up audit was warranted. The current report describes the department's progress in implementing our 1999 recommendations and assesses the effectiveness of screening regulations that the department implemented. We conclude that the department still has made only limited progress in fulfilling its most critical missions related to lead poisoning and has not fully implemented all of our previous recommendations. Foremost, the department has fallen short in its responsibility to ensure that those children it has identified with lead poisoning receive the proper medical care and are protected from further exposure because it has not ensured that local programs are submitting to it all necessary information outlining services provided to lead-poisoned children and does not review the information it does receive.

Additionally, the department is still unable to gain a full understanding of the nature and extent of lead poisoning in California because of its stalled efforts to obtain approval of regulations requiring laboratories to report the results of all blood-lead tests. Also, it has not yet finalized a reporting system that would allow it to receive and track the results of all blood-lead tests electronically. Although the department was recently successful in implementing regulations establishing a standard of care that requires health care providers to conduct screening of children at age-appropriate intervals, the regulations have been in effect too short a time to evaluate their effectiveness in identifying lead-poisoned children. Furthermore, the department lacks a plan for monitoring, enforcing, and evaluating these regulations.

We also found that the department has been unsuccessful in its efforts to strengthen statewide enforcement authority to ensure the reduction or elimination of identified lead hazards. Furthermore, although the department has in place a curriculum for its lead-safe schools training program, it has yet to conduct this training for all the schools it has targeted. Finally, although the department has made improvements in conducting outreach and education about lead hazards, it has not yet finalized its state plan for conducting outreach to health care providers (providers).

The department's Childhood Lead Poisoning Prevention Branch (branch) has made some progress in implementing our 1999 audit recommendations, but its progress has been hampered by a lack of staff and by lawsuits that have diverted its attention

away from its primary duties. The branch's ability to obtain adequate staffing and avoid future lawsuits is threatened by a projected funding shortfall that the department has yet to fully address. The department will need to address this funding issue to avoid potential cutbacks in program operations and lawsuits that may further hamper its ability to adequately protect California's children from lead poisoning.

RECOMMENDATIONS

To obtain adequate data on where and to what extent lead poisoning is a problem in the State and to ensure that it identifies and protects lead-poisoned children, the department should continue its efforts to take the following actions:

- Ensure that local programs submit all case management information outlining the services that have been provided to lead-poisoned children.
- Monitor local programs' activities to ascertain whether lead-poisoned children receive appropriate care.
- Adopt regulations requiring laboratories to report all blood-lead test results.
- Complete the testing and installation of software that will allow laboratories to electronically submit their results.
- Revise its screening regulations to include provisions for making providers accountable and for enforcing the requirements.
- Develop a plan to monitor and evaluate its screening regulations and statewide targeted screening policy.
- Seek legislation granting the department, cities, and counties the authority to investigate, order, and enforce the abatement of lead hazards.
- Finalize and implement a comprehensive statewide provider outreach plan.

Finally, to ensure that the Childhood Lead Poisoning Prevention Program (program) is able to adequately protect California's children from lead poisoning, the department should take the steps necessary to ensure that the program has adequate funding and staffing to achieve its mandates and goals.

AGENCY COMMENTS

The department agrees with our findings and states it will continue taking action to implement our recommendations as available resources permit. ■

INTRODUCTION

BACKGROUND

According to the Department of Health Services (department), childhood lead poisoning is both completely preventable and the most common environmental health problem affecting California's children. Although nationwide blood-lead levels have been declining in recent years, many children throughout the country still suffer from this problem. In 1986 the Legislature created the Childhood Lead Poisoning Prevention Program (program) within the department to determine the extent to which lead poisoning posed a problem to children in California. The Legislature directed the department to compile information on the prevalence, causes, and geographical occurrence of high blood-lead levels, and to design and implement a program to reduce the incidence of excessive childhood lead exposure in California. The Legislature directed the department to report its findings from these efforts by January 1, 1989. In general, the department found that testing a child's blood is the only way to determine lead poisoning, that even low levels of lead can affect a child's health, and that very few children were receiving blood-lead tests. The department estimated that tens of thousands of California children may be suffering from the effects of lead poisoning.

What is lead poisoning?

Lead poisoning is a disease that occurs when one absorbs lead, a highly toxic heavy metal, into the body. Because children absorb 50 percent of the lead they ingest or inhale, they are at risk of being poisoned.

How does lead poisoning affect children?

Lead is especially damaging from birth to age 6 because it interferes with brain, organ, and nervous system development. Lead poisoning is commonly referred to as a silent disease because most lead-poisoned children exhibit no obvious symptoms.

What causes lead poisoning?

The most common sources of lead poisoning are lead-contaminated dust and soil that small children ingest. Lead-based paint found in and around older buildings contributes to this contamination, as does lead released into the air from industrial emissions and leaded gasoline.

How common is lead poisoning?

The United States Centers for Disease Control and Prevention, which establishes guidelines for the identification, evaluation, and care of lead-poisoned children, believes that incidences of lead poisoning are declining. However, it estimates that nearly 900,000 children in the United States still have high enough levels of lead in their blood to cause adverse effects.

As a result of these findings, in 1991 the Legislature expanded the department's responsibilities, requiring it to implement certain changes to its program by 1993. For instance, the Legislature required the department to ensure that all lead-poisoned children receive appropriate case management, which entails coordinating needed medical, social, educational, and environmental services. It also directed the department to adopt regulations that require health care providers to evaluate all children for the risk of lead poisoning. In 1993 the Legislature further expanded the program, granting

the department the authority to govern the reduction or elimination (abatement) of residential lead-based paint to comply with the federal Residential Lead-Based Paint Hazard Reduction Act of 1992. The Legislature charged the program to not only identify and care for lead-poisoned children but also to reduce and eliminate sources of lead to prevent further exposure. The department's Childhood Lead Poisoning Prevention Branch (branch) carries out these responsibilities.

In addition to fulfilling these legislative mandates, the department must meet certain requirements imposed upon it as the result of a lawsuit filed against it in December 1990. The court dismissed the lawsuit in October 1991 as the result of a legal settlement requiring that all of the estimated 468,000 children receiving services from the State's Child Health and Disability Prevention (CHDP) program receive a blood-lead test at ages 1 and 2. The settlement also requires the department to obtain and analyze the results of blood-lead tests performed on all children up to age 15.

Case Management Activities According to Blood-Lead Level

According to several medical studies, for every 10 µg/dL* increase in blood-lead level, a child's mean IQ was lowered by 4 to 7 points. Additionally, absorbed lead may cause learning disabilities, behavioral problems, anemia, and nerve and brain damage.

The follow-up services listed below are a joint responsibility of the health care provider and local health jurisdiction.

µg/dL	Follow-Up Service
<10	Reassess or rescreen in one year.
10-14	Provide family lead-poisoning prevention education, follow-up testing, and referrals for social services, if necessary.
15-19	Same service as in 10-14. If this blood-lead level persists (child has two blood-lead levels within this range from tests taken at least 30 days apart) or worsens, proceed according to actions for levels 20-44 µg/dL.
20-44	Initiate home visit and provide case and clinical management. Conduct environmental investigation and provide lead hazard control.
45-69	Within 48 hours, initiate case and clinical management, environmental investigation, and lead hazard control.
70+	Hospitalize child and initiate medical treatment immediately. Begin case and clinical management, environmental investigation, and lead hazard control.

* Micrograms of lead per deciliter of human blood.

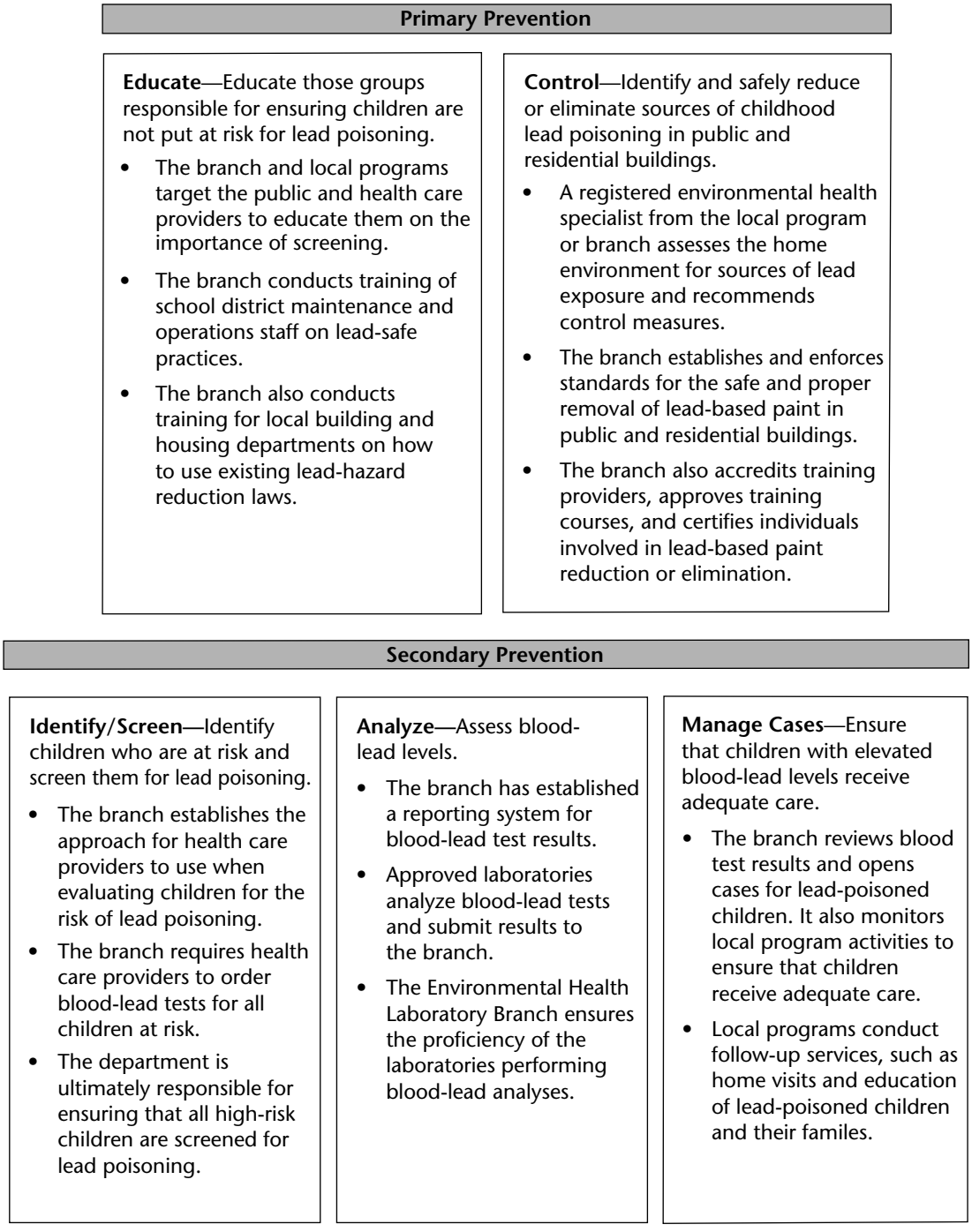
The Department Works With Health Care Providers, Laboratories, and Local Programs

The department protects children from lead poisoning in two ways. Primary prevention consists of preventing a child from ever becoming exposed to lead through education about its hazards and through elimination of the sources of lead exposure. Secondary prevention entails identifying children with lead poisoning and ensuring that they receive adequate care. The department works with others to protect children from lead poisoning, as shown in Figure 1. Health care providers (providers) order blood tests to determine whether children have been exposed to lead. Laboratories approved by the department's Environmental Health Laboratory Branch analyze blood-lead tests and submit the results to the branch, which opens and manages cases for lead-poisoned children. The branch contracts with local childhood lead poisoning prevention programs (local programs) in California's counties and cities for follow-up care. Case management should entail monitoring local programs to ensure that they provide

adequate care to the children. Both the branch and these local programs strive to educate the public and providers about lead-poisoning prevention.

FIGURE 1

Primary and Secondary Prevention Services Currently Provided by the Branch, Health Care Providers, Laboratories, and Local Programs



The branch is also responsible for developing and maintaining the portion of the program that works to identify and control sources of lead hazards. Currently, the branch establishes and enforces standards for identifying and safely removing lead-based paint, and it accredits training providers who educate those in the construction trade on how to identify and control lead hazards. Further, the branch certifies that those individuals who work to control lead hazards have met its regulatory requirements for education, training, and work experience.

Additionally, the branch has created two new sections. The Health Information Systems Section is responsible for integrating the branch's data systems and databases to allow for tracking the certification of individuals who work to reduce or eliminate lead hazards and the accreditation training programs. This section is also responsible for improving the branch's ability to communicate electronically—both internally and externally—with local programs, laboratories, other state programs, and the public. The Program Evaluation and Research Section is charged with devising strategies for obtaining data to assess screening rates, analyze epidemiology,[1] and develop methods for evaluating and monitoring branch and local program efforts in reducing exposure to lead and identifying lead-poisoned children.

The Program Has Multiple Funding Sources

Most of the branch's funding for the program during fiscal year 1999-2000 came from fees levied on companies that the department determines either formerly or currently are responsible for significant environmental lead contamination. Examples include companies who formerly made leaded paint or gasoline or whose operations emit lead. These companies are believed to be primarily responsible for contaminating sources such as paint, soil, and dust that cause childhood lead poisoning. A state law enacted in 1991 imposed these fees to support activities aimed at identifying lead-poisoned children and ensuring that they receive adequate care. The Board of Equalization began collecting the fees for the branch in fiscal year 1992-93.

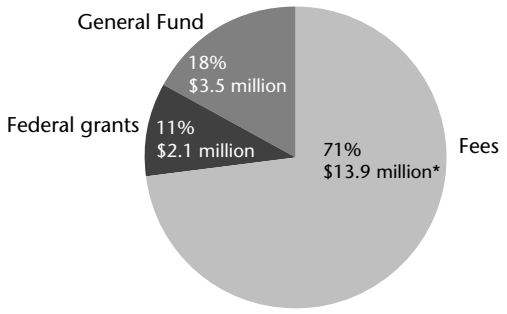
These fees made up more than $13.9 million, or 71 percent, of the branch's fiscal year 1999-2000 funding. Of this amount, the branch allocated $8.4 million to local programs using a formula

[1] Epidemiology is the study of the incidence, distribution, and control of a disease in a population.

based upon the number of old housing units, the number of cases opened for case management between 1992 and 1997, and the estimated costs of managing the anticipated cases in each area. As shown in Figure 2, the remaining $5.6 million of the branch's budget comes from the State's General Fund appropriations and federal grants.

FIGURE 2

The Childhood Lead Poisoning Prevention Program Has Multiple Funding Sources (Fiscal Year 1999-2000)



Source: The California Governor's Budget of 2001-02 and the State of California Budgetary/Legal Basis Annual Report for the year ended June 30, 2000.

* The $13.9 million includes $1.7 million in penalties and interest.

A lawsuit filed against the department called into question the legality of the industrial fees that make up the majority of the branch's funding. In 1995 the California Superior Court ruled that the fees were an illegal tax. The department appealed the ruling to the California Supreme Court and took several actions to preserve the program in the event the outcome was unfavorable. In anticipation that it might be required to return them, the department did not spend the fees collected during fiscal year 1996-97; in addition, it reduced the branch's staff by nearly 30 percent, reduced the funding to local programs, and directed the branch to seek alternative funding sources to support local program activities. After two years of uncertainty about the future of the program, in 1997 the California Supreme Court overturned the lower court's decision and ruled that the fees are in fact legal. Although this final outcome was favorable for the department, the uncertainty caused by the lawsuit and the department's reaction to it had a significant adverse impact on the branch and its staffing levels, which it is still struggling to overcome.

The 1999 Audit Report Criticized the Department's Progress

The Bureau of State Audits (bureau) reviewed the department's progress in identifying and protecting California's children with lead poisoning and in April 1999 issued a report entitled *Department of Health Services: Has Made Little Progress in Protecting California's Children From Lead Poisoning*. The report concluded, in part, that the department failed to meet the goals that the Legislature set for it to evaluate all children for their risk of poisoning, test those children determined to be at risk, and provide case management for those who have lead poisoning. Furthermore, the report concluded that the department did not follow the initial federal guidance on the appropriate approach to blood-lead testing. The report also concluded that the department failed to ensure that the providers participating in its Medi-Cal and CHDP programs and providing services to about 70 percent of the State's 1- and 2-year-old children order blood-lead tests in accordance with program requirements.

Of equal importance, the 1999 report found that the department had not yet developed a reporting system to track the results of all blood-lead tests despite a 1991 legal settlement requiring it to do so. As a result, the department was unable to report accurately on where and to what extent lead poisoning existed in the State, nor was it able to ensure that children suffering from lead poisoning received appropriate care. In addition, the department had not appropriately monitored the case management of those children whom it had identified as suffering from lead poisoning.

The department had made some progress toward protecting children from lead hazards. For instance, it established a program to reduce lead exposure caused by unsafe renovations or removal of lead-based paint, and it also conducted a study of school and day care facilities throughout the State to determine the prevalence of lead hazards. Although the program aimed at reducing lead exposure qualified the State and local agencies for federal funding, this funding was threatened because the department had not demonstrated that it had the legal authority necessary to compel violators to sufficiently reduce or eliminate identified lead hazards from unsafe renovations or dwellings. We also reported that the department had yet to complete a curriculum to educate school and day care facility staff on appropriate steps to reduce or eliminate lead hazards.

As part of our April 1999 audit report on the department's program, we made a total of 11 recommendations to ensure that it could adequately protect California's children from lead poisoning. See the Appendix for a more detailed listing of the recommendations from the 1999 audit and a summary of the department's progress in implementing those recommendations.

SCOPE AND METHODOLOGY

Chapter 540, Statutes of 2000, requires that the bureau report to the Legislature on the effectiveness of the department's screening regulations aimed at increasing the number of at-risk children identified, screened, and evaluated for lead poisoning. After reviewing preliminary data, we determined that it is too soon to tell whether the regulations, enacted in October 2000, are effective in increasing the number of children identified with lead poisoning. This statute also requires the bureau to report on the extent to which the department has addressed the recommendations made in our April 1999 report. In conducting this follow-up audit, we reviewed the responses the department made to the bureau at 60 days, 6 months, 1 year, and 1½ years after that report.

To determine its actions for ensuring that local programs are appropriately performing case follow-up activities, we reviewed the department's policies and procedures, and interviewed department and management staff. We also reviewed reports that showed some case management forms were missing.

To assess the branch's efforts to obtain the blood-lead results of all children tested within California, we reviewed its proposed regulations, reports, planning and budgetary documents, and screening data, and we interviewed responsible managers.

To examine the effectiveness of the department's efforts to increase the screening rate of California children in at-risk populations, such as CHDP and Medi-Cal service recipients, and its efforts to provide outreach and education to local programs and providers, we reviewed screening data, policies, regulations, and proposed regulatory changes, and compared them to guidance issued by the United States Centers for Disease Control and

Prevention; reviewed legal and other pertinent documents, reports, and plans; and interviewed its outside consultants, management, and staff.

Finally, to evaluate the department's progress in controlling lead hazards, we examined its proposed legislation, lead hazard abatement and enforcement training curriculum, and its training aids and schedules; we also interviewed department managers. To determine whether local programs' ability to ensure the abatement of lead hazards has improved, we interviewed the staff of 11 local programs that had previously reported their inability to do this. ■

CHAPTER 1

The Department Still Needs to Improve in Monitoring the Care of Lead-Poisoned Children and Determining the Extent of Lead Poisoning

CHAPTER SUMMARY

The Department of Health Services (department) has fallen short in its responsibility to ensure that children identified with lead poisoning, a condition with potentially devastating effects on health, learning ability, and behavior, receive the proper medical care and are protected from further exposure. Furthermore, the department has not fulfilled its responsibility to sufficiently identify the children requiring blood-lead testing and to determine where and to what extent childhood lead poisoning exists in California. Although its Childhood Lead Poisoning Prevention Branch (branch) has tried to meet these responsibilities, the results are mixed.

To ensure that lead-poisoned children are cared for, the branch has worked with California's cities and counties to develop local childhood lead poisoning prevention programs (local programs) to provide case management services. The branch has established a process for local programs to follow when managing cases, but it has failed to determine whether they are adhering to the process. As a result, the branch does not know whether the lead-poisoned children it has identified have received adequate care to reduce the amounts of lead in their blood to safe levels or whether the sources of lead were identified and reduced or eliminated.

Further, the branch has not made adequate progress toward determining the nature and extent of lead poisoning within California. It is still unable to determine the number of children affected by lead poisoning because it has yet to require laboratories to report the results of all blood-lead testing throughout the State. This, in turn, keeps the department from upholding the terms of a legal settlement requiring it to include the results of blood-lead tests for all children up to age 15 in its blood-lead reporting system. Additionally, although the branch has made some progress toward developing a system for laboratories to report blood-lead test results, the system remains incomplete.

The lack of data hinders the branch's ability to determine whether all children requiring case management receive these services. Although the branch has requested that laboratories voluntarily report all blood-lead test results, it neither requires this nor monitors the laboratories to ensure that they are actually doing so. Also, because the branch's efforts to revise the reporting requirements to correspond with its case management criteria have been unsuccessful, it has no way of ensuring that it is fulfilling its responsibility to identify all children who need case management services. The disparity between the branch's estimate of the number of children requiring case management services (38,000) and the number of children to whom it actually provides services (3,700 as of January 2001) indicates that many children have not been tested. Even when children have been tested, the branch has not ensured that the laboratories have reported all results.

THE BRANCH STILL DOES NOT ENSURE THAT LEAD-POISONED CHILDREN RECEIVE ADEQUATE CARE

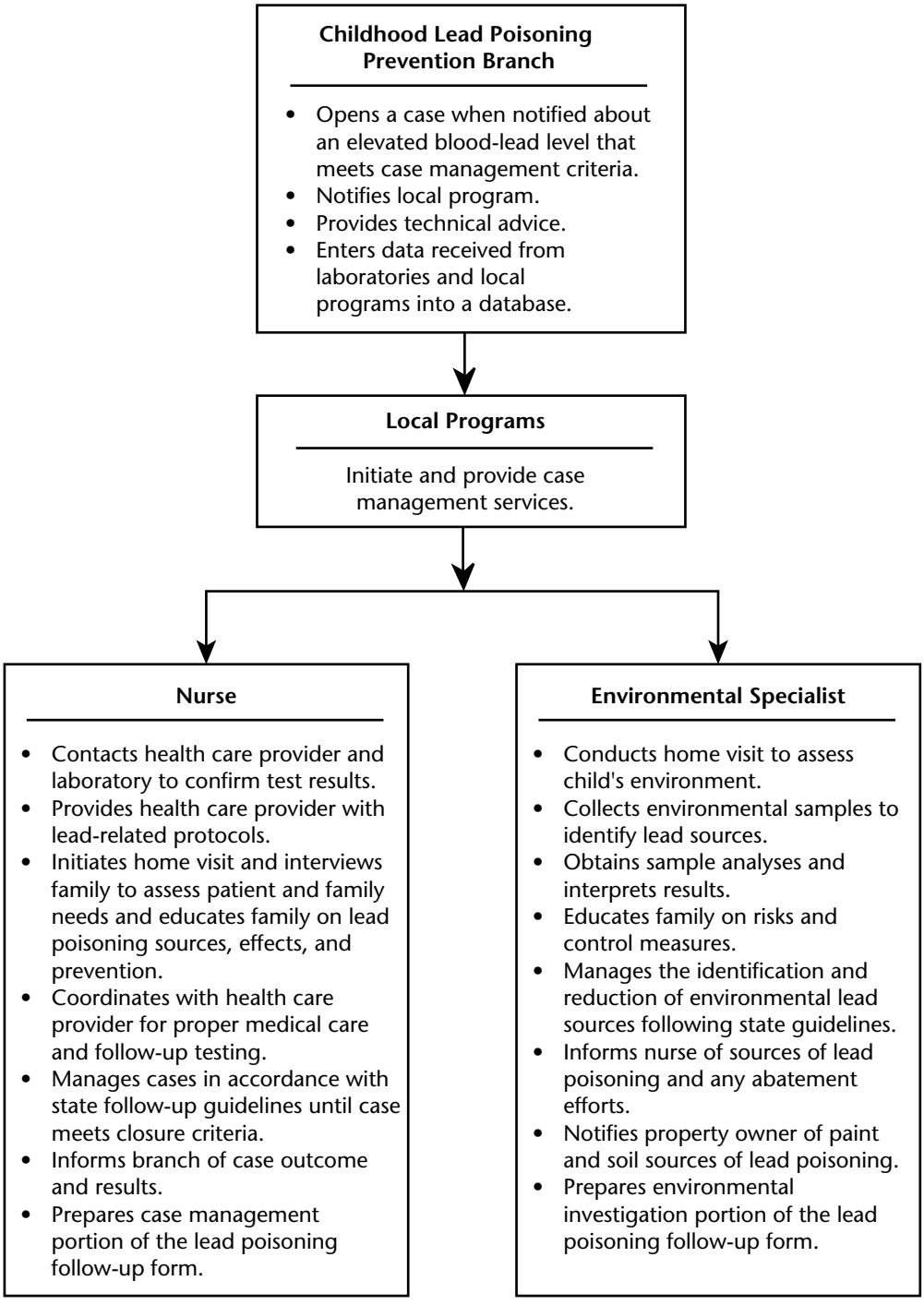
The branch only recently began implementing the recommendations from our April 1999 audit.

Under existing state law, the branch is responsible for seeing to it that lead-poisoned children receive appropriate case management services. To fulfill this responsibility, the branch contracts with local programs throughout California to provide needed services. As shown in Figure 3, when a lead poisoning case is identified, the branch formally notifies the local program, which is then responsible for the child's case management and care coordination. Although local programs are responsible for providing follow-up care to lead-poisoned children, our 1999 audit revealed that the branch did not require them to comply with its established guidelines, nor did it determine whether the children were receiving adequate care. Because the branch only recently began implementing our recommendations, its progress in these areas is limited.

Due to the processes involved in removing lead from the body and the time it may take to identify and remove the exposure source, the overall length of care may extend to several years. Therefore, activities must be structured so that they are easily monitored and analyzed to determine the effectiveness of the services provided. Local programs use the lead poisoning follow-up form (follow-up form), which the branch requires, to collect and document case data about the lead-poisoned child; this essentially serves as the child's medical and environmental case management record. The follow-up form also functions as a guide to local

FIGURE 3

Case Management Process



Source: The Childhood Lead Poisoning Prevention Branch's Public Health Nursing Case Management Guidance Manual for Local Programs.

programs, detailing branch-required case management actions and facilitating communication among members of the local program team. The branch and the local programs also use information from the follow-up form to identify and describe the epidemiological features of childhood lead poisoning, including the characterization of high-risk populations and the identification of sources of lead exposure. The local program should submit the follow-up form to the branch at least two times—after conducting the initial home visit and again after closing the case.

The Branch Has Not Enforced Its Reporting Requirements

For the period January 1992 through March 2001, the branch was missing 794 follow-up forms—the form used to ensure lead-poisoned children get the care they need.

When we began this review, the branch still had not identified which local programs were not submitting all of the required follow-up forms and had taken no action to enforce compliance. The chief of the Program Evaluation and Research Section told us that the branch lacked the staff needed to perform this activity. However, in March 2001 the branch generated reports from its database detailing the number of cases for which a follow-up form was missing for each of the 62 local programs (58 counties and 4 cities). These reports revealed 794 missing initial follow-up forms. The reports included all children identified as having elevated blood-lead levels and for whom follow-up forms were missing between January 1, 1992, and March 5, 2001. Without these forms, the branch cannot ensure that lead-poisoned children received any care or whether the care received was adequate.

Armed with this new data, the branch has now begun to take action. It reassigned a full-time staff person to follow up on the missing forms. The branch sent each local program a list of their missing forms during the first part of March 2001, along with a letter detailing the local programs' responsibility to respond to the information and to provide either evidence of the case follow-up or justification as to the case closure. To prompt local programs to submit all required follow-up information, the branch plans to contact them each quarter about any missing forms. The local programs will then have three weeks in which to provide the missing reports. At the end of four weeks, the branch will begin contacting local programs regarding any information that is still missing. Failure to account for the cases or to provide evidence of case closure could result in branch staff visiting the local program to review the more detailed client records. It is too soon to tell how effective these efforts will be. However, if the branch follows through, it should be able to gather the missing information it needs from local programs.

The Branch Does Not Monitor the Care of Lead-Poisoned Children

Following our prior audit, the branch reviewed five local programs' case management and environmental activities but lacked adequate staff to continue the reviews.

During the six months following the release of our April 1999 audit, the branch temporarily implemented a process to conduct on-site reviews of five local programs' case management and environmental investigation; however, the branch discontinued this process in October 1999. According to the chief of the Program Evaluation and Research Section, the branch did not have sufficient staff to continue. He also told us that the manager overseeing the project at the time decided that the branch needed a more detailed case management protocol to use as a guideline for evaluating local programs. However, the on-site reviews it conducted proved worthwhile because the branch found instances at two of the five local programs in which documentation of adequate care was either incomplete or missing. The branch was able to bring these issues to the attention of these local programs for resolution.

Although its efforts to update its case management protocol for monitoring local programs have been hampered by staff turnover and the protocol is still in draft form, the branch developed and is beginning to implement two new procedures for monitoring the activities of local programs. If the branch follows through with its plans, it will meet both of our 1999 audit recommendations concerning the monitoring of local programs. First, the branch devised and adopted a procedure to conduct high-level reviews of all the follow-up forms it receives. The new procedure requires that a data collector or data analyst review all follow-up forms for completeness and direct any forms that trigger concerns about technical or medical questions to a public health medical officer, nurse consultant, or research scientist for review. Second, the data collector or data analyst will direct forms that trigger questions about the appropriateness of closing the environmental investigation to a registered environmental health specialist for additional review.

The new procedure also includes conducting a more detailed review of a sample of the follow-up forms received by the branch each month. Between September 2000 and February 2001, the branch received an average of 140 follow-up forms per month; of these, it plans to review at least 10 forms—5 follow-up forms detailing the initial home visit and 5 detailing the closure of a case. The information from the reviews will be entered into a database and periodically analyzed to identify problems that may be occurring in certain local programs. After analyzing the

data, the branch will then contact these local programs for resolution of the identified issues. However, the branch has yet to establish a time frame for completing the analysis.

If successfully implemented, the branch's new procedures for monitoring local programs should allow it to quickly identify and resolve problems.

Using its draft case management protocol as a guide, the branch recently drafted an audit form, which the branch plans to use to conduct on-site reviews of local programs' case management documents and procedures. The branch's current plan is to review at least one local program per month to determine whether it is following proper case management procedures. The chief of the Program Evaluation and Research Section believes these on-site reviews are necessary to gather information that is not currently reflected in the follow-up forms. Additionally, the on-site reviews will allow the branch to review the more detailed client records, and will offer an opportunity to discuss case management issues raised by local programs or as a result of the reviews.

To its credit, the branch has successfully installed a case management and surveillance system that allows local programs to monitor the services they provide to lead-poisoned children. The 30 local programs that use the system manage approximately 90 percent of the 3,700 identified childhood lead poisoning cases in California as of January 22, 2001. However, currently 32 local programs still do not use the system. Based on recent discussions with these local programs, the branch anticipates that at least 6 of the 32 will be using the system by the end of 2001. According to the acting chief, the branch decided to use its limited resources to implement this system, as opposed to continuing its on-site program reviews, because it believed that giving local programs the ability to self-monitor all of their lead poisoning cases was more effective than the branch reviewing a sample of those cases. Although providing local programs with a tool to self-monitor has merit, this still does not relieve the branch of its responsibility to monitor local programs to ensure that California's lead-poisoned children receive appropriate care.

THE DEPARTMENT HAS NOT IDENTIFIED THE EXTENT OF CHILDHOOD LEAD POISONING

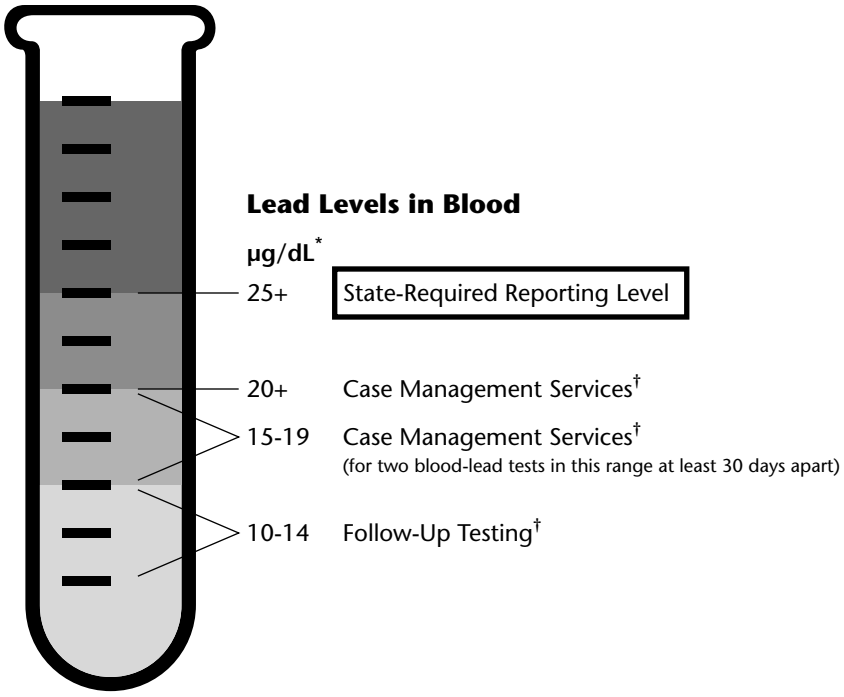
As early as 1986, the Legislature charged the department with determining the nature and extent of lead poisoning within the State. Now, more than 14 years later, the department is still unable to make this determination because it has not obtained sufficient data. Further, the branch has yet to finalize the testing and installation of a system to allow laboratories to electronically

report results of blood tests. Efficient reporting of all blood-lead tests and their results would have provided the branch the data necessary to evaluate and report on the nature and extent of lead poisoning among California's children.

The lack of crucial data also hinders the branch's ability to determine whether all children requiring case management receive the services they are due. As illustrated in Figure 4, state law currently requires laboratories to report only those blood-lead test results that equal or exceed 25 micrograms of lead per deciliter of human blood (µg/dL). However, according to the branch's guidelines, children with blood-lead levels as low as 15 µg/dL require case management services. Although the branch has requested that laboratories voluntarily report blood-lead test results between 15 µg/dL and 25 µg/dL since 1994, this is not required and the branch does not monitor the laboratories to ensure that they are submitting all results meeting these criteria.

FIGURE 4

Current Blood-Lead Reporting Guidelines Do Not Ensure That All Children Requiring Case Management Receive These Services



* Micrograms of lead per deciliter of blood.

† Department guidelines based on the United States Centers for Disease Control and Prevention recommendations require intervention at this level.

The department lacks sufficient data to determine the extent of lead poisoning among California's children, in part, because it does not receive the results of all blood-lead tests.

In fact, the branch estimates that approximately 128,000 of California's children from the age of 1 to 5 years have elevated blood-lead levels, including 38,000 who require case management services such as individual medical care and an investigation to find the source of the lead poisoning. As of January 2001 the branch has identified only 3,700 of these children. This substantial disparity exists because many children throughout the State have not been tested; even when children have been tested, the branch has not required that laboratories report all results from 15 µg/dL to 25 µg/dL. Therefore, until the branch is successful in its efforts to revise the reporting requirements to correspond with its criteria for providing case management, it will be unable to identify all children with elevated blood-lead levels and ensure that they receive the proper medical care and services.

Although it has been unsuccessful in determining the extent of lead poisoning statewide, the branch has supported some local efforts to identify lead-poisoned children. Between January 1999 and September 2000, the branch funded the efforts of four local programs to conduct targeted blood-lead screening projects in high-risk areas. These efforts targeted either specific neighborhoods or specific groups, such as children enrolled in the Women, Infants, and Children Program and children living in a homeless shelter.[2] As a result, 9,500 children took blood-lead tests; results showed that 354 had elevated blood-lead levels. Although these efforts were beneficial in assessing the lead poisoning rates in specific targeted areas and groups, until the branch implements its regulations requiring laboratories to report the results of all blood-lead tests, it will be unable to determine the full nature and extent of childhood lead poisoning.

Regulations Requiring Laboratories to Report All Blood-Lead Test Results Are Stalled

As of March 2001 the branch has yet to succeed in its efforts to establish regulations requiring laboratories to report all blood-lead test results. Although it proposed regulations to require laboratories to report the results of all blood-lead tests nearly two years ago, the branch has been unable to gain approval because, according to the Department of Finance, it lacks the funding and staffing needed to handle the expected increase in workload. In an effort to increase its funding, the branch proposed in October 2000 to increase fees from the paint and fuel industries to levels allowed

[2] The Women, Infants, and Children Program provides vouchers for nutritious food, individual counseling, and health care referrals to high-risk, low-income women and children up to the age of 5.

According to the Department of Finance, the branch lacks the funding and staffing needed to handle the workload that would result from its proposal to require laboratories to report all blood-lead tests.

by the legislation that created the program. The branch's proposal received department approval in December 2000; however, as of April 2001 the California Health and Human Services Agency (agency) had not approved it. We discuss the history of this more completely later in this chapter. Despite these setbacks, the branch is once again proposing regulations requiring laboratories to report all blood-lead test results. The branch is seeking approval for these regulations by July 2001. However, because its funding proposal will not receive a decision in time to be implemented during the upcoming fiscal year 2001-02 budget cycle, it appears that for at least the immediate future, the branch must identify another approach to demonstrate that it has necessary resources to implement its proposed regulations.

Of additional concern to us is the fact that, during negotiations with the California Conference of Local Health Officers,[3] the branch revised its proposed regulations for laboratory reporting, and these no longer include a requirement for laboratories to report information regarding the race, ethnicity, and funding source for children receiving blood-lead tests. The branch agreed to remove these provisions from its regulations because the information is difficult for health care providers (providers) and laboratories to obtain. Without this important epidemiological information, the branch will have difficulty determining whether particular groups are more susceptible to lead poisoning and whether providers screen children in programs for low-income families as the State requires. According to the chief of its Program Evaluation and Research Section, the branch will be able to gather race and ethnicity data by taking samples of providers' records for children receiving blood-lead tests and then projecting the race and ethnicity for all children for whom it receives blood-lead test results. Because it already collects this data for lead-poisoned children requiring case management, the branch can combine the results to determine whether higher rates prevail among children of certain races or ethnicity and design appropriate strategies for protecting them. The branch plans to use a similar process to gather funding source information that will allow it to identify children receiving blood-lead tests that are paid for by the State's Child Health and Disability Prevention (CHDP) and Medi-Cal programs. Using this data, the branch hopes to determine whether children in these programs continue to have a higher incidence of lead poisoning and are being tested as often as required. The chief of the Program Evaluation and Research Section also believes that such efforts to obtain

[3] The California Conference of Local Health Officers, an advisory group of local health officers, is required by law to review and approve proposed health regulations.

data about race, ethnicity, and funding source will be more efficient and yield more accurate results than will attempts to gather the data from laboratories and providers. If the branch implements these processes, it will alleviate our concerns. However, given the branch's history of limited success with implementing new initiatives and its projected shortfall in funding, as we will discuss later in this chapter, we have concerns about its ability to take on this added responsibility.

Electronic Blood-Lead Test Reporting Infrastructure Is Incomplete

Even if the branch is successful in enacting the laboratory reporting regulations, it is not yet fully prepared to handle the expected increase in blood-lead test reporting—from 1,000 reports per month to 1,000 per day. The branch has not finalized its plans for a new reporting system that will allow laboratories to report testing results electronically. In addition, it has not installed a scanning system capable of handling paper reports and has not adequately upgraded its own database to manage the anticipated increase in reporting. Until it completes these tasks, the branch will need to backlog and manually enter reports when resources permit. Despite these problems, the branch still believes that implementing the regulations will increase its ability to ensure that children are adequately treated by including reports of blood-lead levels from 15 µg/dL to 25 µg/dL and will allow it to determine the number of tests performed statewide so that the prevalence of lead poisoning can be determined.

Implementing electronic blood-lead test reporting is necessary to handle the increased workload expected as a result of the branch's proposed regulations.

Although the branch has developed a software program that facilitates the transmission of laboratory data in a secure, complete, and consistent format, its plans for expanding the software to make it more flexible and to allow more laboratories to use it are incomplete. Implementing electronic reporting is necessary to minimize the resources needed to handle the increased workload that these regulations will require. The branch does not expect to complete its plans, which will expand use of the software to allow 70 percent to 80 percent of the State's laboratories to report electronically, until September 2001. This does not include the installation at each laboratory of software to transfer the data electronically. The branch is unsure when this activity will be complete because of its restricted resources and because many laboratories are reluctant to implement electronic reporting without a mandate to do so. Currently,

only 12 of the State's 118 laboratories that are proficient in blood-lead analysis report the results of all blood-lead tests, and only 3 of these do so electronically.

The branch also needs to install a system that will allow it to electronically scan paper reports into its database. This will enable the branch to handle the increase in the number of reports while it implements electronic reporting systems at each laboratory. Electronic scanning will allow the branch to efficiently handle the 20 percent to 30 percent of smaller laboratories that are unlikely to be reporting electronically in the foreseeable future. According to the chief of the Health Information Systems Section, this scanning system will help expedite the input of reports into the branch's database and will reduce the number of staff needed to perform this work. The branch has secured the needed funding and expects the system to be completed by December 31, 2001.

State Screening Regulation Requirements

- All primary care physicians must notify the parents or guardians of children receiving medical care that the children can be harmed by exposure to lead and that they are particularly at risk of lead poisoning from 1 to 6 years of age.
- Children receiving services from a publicly funded program for low-income children must be screened at ages 1 and 2, and at any time between the ages of 2 and 6 if they have not been screened previously.
- All other children not included in the above group must receive an evaluation using a risk questionnaire at ages 1 and 2, and at any time between the ages of 2 and 6 if they have not been evaluated previously. A child who is determined to be at a high level of risk should also receive a blood test to determine lead poisoning.

Risk Questionnaire—Should your child be tested for lead poisoning?

- Does your child live in, or spend a lot of time in, a place built before 1960 that has peeling or chipped paint?
- Does your child live in, or spend a lot of time in, a place built before 1960 that has been recently renovated?

If you answered "yes" or "I don't know" to either of these questions, your child may be at risk for lead poisoning and should receive a blood-lead test.

Finally, the database system that the branch currently uses to analyze and store incoming data is outdated and nearly at its storage capacity. According to the branch, this database will eventually fail, leaving the branch unable to oversee case management or to analyze the scope and pattern of lead poisoning in California. The branch has received funding and approval to upgrade and improve this database; it expects to complete the upgrades by July 2002. Because implementation of its new laboratory regulations will result in a large increase in the number of blood-lead test results that the branch receives, any delays in the schedule could cause the existing system to fail.

THE BRANCH STILL NEEDS TO DESIGN ENFORCEMENT AND EVALUATION COMPONENTS FOR STATEWIDE SCREENING

The branch developed and disseminated a statewide targeted screening policy in July 1999, which suggests that providers conduct blood-lead testing for all children 1 to 6 years old who are at risk of lead poisoning. The branch further solidified its stance on this advisory policy by enacting similar regulations in October 2000.

Although it developed its screening regulations based upon existing laws and outside guidance, the branch has not yet implemented provisions to monitor and enforce compliance with these requirements and to evaluate their effectiveness. Without these provisions, it cannot ensure that providers are taking necessary action to identify and care for children suffering from lead poisoning or that its requirements are effective in achieving these goals.

State law required the department, with participation from the health care community, to adopt regulations by July 1993 that would establish a standard of care requiring providers to evaluate all children for the risk of lead poisoning during periodic health assessments. At-risk children would receive blood-lead tests. Further, according to the United States Centers for Disease Control and Prevention (CDC), each state should develop a plan for childhood blood-lead screening. To satisfy these directives, we recommended in our 1999 report that the department enact regulations as directed by the Legislature and continue its efforts to develop a state plan in accordance with the CDC's guidance.

Although the branch has substantially complied with state law and the CDC's guidance in enacting its screening requirements, it has not incorporated measures to ensure these requirements are effective. The CDC recommends that states perform periodic monitoring and evaluations of screening policies to ensure their effectiveness. The chief of the Program Evaluation and Research Section told us in March 2001 that he was working with the department's CHDP and Medi-Cal programs to obtain the information needed to monitor whether providers are testing children in these programs as required. Because these children have been determined to be at high risk for lead poisoning, this monitoring is critical. However, the branch should also monitor providers who are not participating in these programs to ensure that they are appropriately assessing the risk of other children. The chief also told us that once the branch implements its proposed regulations for laboratory reporting, it will be able to conduct an evaluation to assess whether revisions are necessary. Because these components are important for ensuring that it has devised an effective strategy for identifying and protecting children with lead poisoning, the branch should establish a formal policy for monitoring and evaluating its screening requirements. Given the recent setbacks experienced by the program, this policy will formalize the branch's commitment to completing these tasks and help to ensure its efforts are not diverted.

The department should monitor and evaluate its screening requirements to ensure they are effective in identifying and protecting children with lead poisoning.

In addition, the branch's screening regulations lack specific provisions for holding providers accountable and for enforcing the screening requirements. In fact, the lack of an enforcement component represents the core of a June 2000 lawsuit that child advocates brought against the department. In response to this legal action, the branch is working with the plaintiffs to revise its regulations and include accountability and enforcement provisions. However, as of March 2001, the revisions had not been finalized. Implementing an enforcement component should ensure both that providers test those children who are at risk for lead poisoning and that the children receive appropriate care.

THE DEPARTMENT DOES NOT IDENTIFY AND EDUCATE MEDI-CAL AND CHDP PROVIDERS WHO FAIL TO SCREEN CHILDREN FOR LEAD POISONING

Although the department has taken steps to educate providers of the need to screen high-risk children for lead poisoning, it has been unable to target its educational efforts to those providers who are not ordering blood-lead tests as required by state and federal screening guidelines. In our 1999 audit, we recommended that the department take immediate action to identify and educate those providers who are not ordering blood-lead tests.

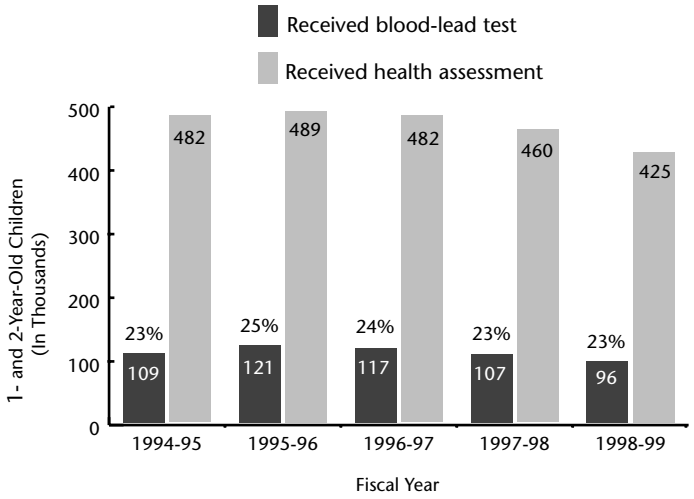
It is the department's responsibility to ensure that Medi-Cal and CHDP providers meet blood-lead testing requirements.

The Health Care Financing Administration, the agency administering the federal Medicaid program, has determined that all children receiving Medicaid services are at risk for lead poisoning. As part of its program, providers are required to test all 1- and 2-year-old children as well as any children between the ages of 3 and 6 who have not been previously tested. The department is responsible for ensuring that the Medi-Cal and CHDP program providers are meeting these blood-lead testing requirements. The department's new screening regulations, discussed earlier, mirror these requirements.

As illustrated in Figure 5, the percentage of children receiving blood-lead testing in the department's CHDP program has consistently remained low in fiscal years 1994-95 through 1998-99. Because this program does not report the blood-lead test results of each child individually, we are unable to conclude whether each child receiving a health assessment during the years presented was also required to receive a blood-lead test. However, it seems clear that many children were not tested at both ages 1 and 2, and that a number of children were never tested at all. Unfortunately, we were unable to determine whether the

FIGURE 5

Many Children Receiving Health Assessments From the Child Health and Disability Prevention Program Are Not Tested for Lead Poisoning



Source: Child Health and Disability Prevention program annual reports on services provided.

program has increased its screening rates after fiscal year 1998-99 because the department does not collect screening data until about 18 months after the end of the fiscal year.

Additionally, according to the department's data, only 17 percent of 1- to 3-year-old children in its Medi-Cal fee-for-service and Medi-Cal managed care programs received a blood-lead test from June 1999 to May 2000. Although in some instances providers may order a blood-lead test and the child's family may choose not to follow through, the testing rates presented above are still extremely low. Therefore, it is reasonable to conclude that the department's inability to ensure that providers order blood-lead tests also contributes to the low rate of testing. Because the children receiving CHDP and Medi-Cal services are often those who are most vulnerable to lead poisoning, the department should identify and educate those providers who are not ordering the tests.

According to the chief of the Children's Medical Services Branch, CHDP has attempted to identify and target providers who are not screening through its local programs, but it has not yet compiled any information regarding the results of these efforts. The branch and Medi-Cal have not yet made any efforts to

identify noncompliant providers; however, the branch is working with Medi-Cal and CHDP to determine a method to gather this information. According to managers of CHDP and Medi-Cal, the only way to identify these noncompliant providers currently is through detailed chart reviews. The chart reviews entail a physical review of patients' medical charts, which would be time-consuming and expensive to complete. Because the department is already short on staff and budget, this appears to be an impractical method to determine those providers who are not screening.

Although it has not identified those providers who fail to screen, the branch has taken measures to educate all CHDP and Medi-Cal providers through mailings and seminars.

Although the branch has been unable to identify those providers who are not screening, it has targeted all CHDP and Medi-Cal providers for educational activities. To its credit, the branch has made several efforts to educate these providers of their responsibility to screen children for lead poisoning. These efforts include distributing copies of its statewide targeted screening policy to 27,500 providers throughout the State and conducting numerous seminars. Currently, the CHDP and Medi-Cal programs have also done mailings to inform providers of their responsibility. Although targeting all CHDP and Medi-Cal providers may have merit, the branch could improve the effectiveness of its outreach efforts by targeting those providers who fail to comply with the screening requirements.

BARRIERS HAMPER THE BRANCH IN EFFECTIVELY MEETING PROGRAM OBJECTIVES

The branch's progress in protecting California's children from lead poisoning has been hindered by the lack of adequate staff and by lawsuits that divert the attention of the staff it does have away from its primary mission. Of equal concern, without an infusion of funding, the branch is projecting a funding shortfall in fiscal year 2003-04 that would likely result in cutbacks in the Childhood Lead Poisoning Prevention Program (program) activities, which we have shown in this chapter to be already insufficient. Cutbacks would increase the potential for further lawsuits due to the branch's continued inability to adequately identify and care for lead-poisoned children.

Inadequate Staffing and Lawsuits Are an Ongoing Problem

As we discussed in the Introduction, in reaction to a lawsuit that threatened the program's primary funding source, the branch reduced staff positions by 30 percent during fiscal year 1996-97. We reported in our 1999 review that the lawsuit had been

resolved and that the branch had just begun to restore its staffing levels. However, in responding to that audit, the branch listed continuing staffing and recruitment issues as barriers to the full implementation of our recommendations.[4] Our review of staffing levels as of April 2001 confirmed the branch's shortage, showing that the branch had vacancies in 17 of 62 (27 percent) of its budgeted positions that primarily support its screening and case management activities.

As of April 2001, the branch had vacancies in 17 of 62 of its budgeted positions that support screening and case management activities.

According to the acting chief of the branch, these vacancies are the result of staff turnover and the branch's difficulties in successfully attracting and hiring staff. He also told us that the reasons for the branch's hiring difficulties include the lack of timely department hiring examinations, inadequate recruitment efforts, and inadequate salaries when compared to private industry and local health departments—especially in the San Francisco Bay Area, the location of the branch. He believes that limited candidate pools resulting from the strong economy and low levels of unemployment further exacerbate these issues. A May 2000 recruitment and retention study completed by a department consultant also highlighted and provided recommendations to the department for addressing these issues. In October 2000 the department completed a plan of action to address these and other issues noted in the consultant's report. In implementing this plan, the department increased staffing in the unit responsible for giving employment examinations and created a new unit to assist in the recruitment of candidates. The department also continues to work with the Department of Personnel Administration to secure approval for increasing the starting salaries of candidates in hard-to-fill positions. However, because these changes are relatively new, the branch has yet to see much improvement in its ability to fill positions—as evidenced by its high vacancy rate.

The branch's progress in implementing the recommendations from our 1999 audit has also been affected by the loss of its branch chief in September 2000. In addition, three of six section chiefs responsible for overseeing the branch left between May 1999 and October 2000. In fact, the branch chief position and two of the six section chief positions remain unfilled as of April 2001.

[4] The Bureau of State Audits (bureau) requests that the subject of audit recommendations provide an initial response to the audit report, which is appended to the report, and subsequent written progress updates on its efforts to implement the recommendations 60 days, 6 months, and 1 year after the report is issued. In this case, after the first year the bureau asked the department to provide additional updates every 6 months until all the recommendations were implemented.

Additionally, existing branch staff have been diverted from their regular duties to respond to two legal actions. A 1999 lawsuit challenged the method by which the department assesses the fees on paint and fuel companies. Another lawsuit, as mentioned earlier, is seeking to require the branch to add enforcement and accountability components to its existing blood-lead screening regulations.

Despite these problems, the department is responsible for ensuring that the branch has the staffing and resources necessary to fully implement program goals in a timely manner. Until the branch can fill these key positions and focus on its program responsibilities, it will be unable to make effective progress in the fight to end childhood lead poisoning.

Projected Funding Shortfalls May Threaten the Branch's Current Level of Program Operations and Its Ability to Make Needed Improvements

The branch projects that it will be unable to continue current program activities beyond fiscal year 2002-03 without an increase in annual funding.

For the last three years, the branch has been using earlier acquired reserves to help fund its annual operations. Without an increase in annual funding, the branch projects that it will be unable to continue the activities of the program at the current level beyond fiscal year 2002-03. As we noted earlier, even the program's current level of activities is not sufficient, thus, further cuts in the program would lead to an even greater gap in services and expectations and would make it difficult for the branch to complete the improvements we recommend to ensure that children are adequately protected from lead poisoning.

As we discussed earlier, nearly three-fourths of the program's funding is from fees assessed on those industries that contributed to environmental lead contamination, such as the paint and fuel industries. The original legislation creating the program specified maximum fee collections of $16 million per year but allowed increases annually based upon increases in the cost-of-living and the number of children in the program. However, since the fee collections began in 1993, the department's practice has been to limit its assessment of fees on these industries to a maximum of $12 million per year because of an administrative agreement with the former governor's office. Now, seven years later, the original reasons and intent for capping the fee collections have become clouded. In its proposed fiscal year 2001-02 budget, the branch notes that a common misconception exists that the fees are to remain forever capped at $12 million. According to the law, the department has the authority to increase its fee assessments.

Since a budget expansion in fiscal year 1998-99, the cost of the program's activities has exceeded its annual funding levels. However, the program has been able to make up these differences using reserves it built up during the early years of the program when expenditures were less than the annual fee collections and when it did not spend the fees it collected in fiscal year 1996-97. The branch currently projects that, in the absence of an increase in annual funding, it will deplete these reserves during fiscal year 2003-04 and it will then need to begin scaling back program services. Scaling back services could result in increased lawsuits against the department for not carrying out its program objectives and adequately protecting children from lead poisoning. Using the actual amount of the branch's reserves at the end of fiscal year 1999-2000, we project that at its current level of operations, the branch will not use up its declining reserve balance until after fiscal year 2003-04. Of course, if the branch enhances its operations, as we recommend, it would deplete its reserves sooner.

Since fiscal year 1998-99, the cost of the program's activities has exceeded its annual funding levels.

To address its projected funding shortfalls, the branch completed an issue memo in October 2000, which details these problems and requests approval to increase the fee collections to the level allowed by law—currently projected at $22 million per year. The department approved the branch's issue memo and submitted it to the agency for approval in December 2000. The agency notified the department that it was unable to approve the memo as presented and has scheduled meetings in April 2001 to determine a final approach and strategy for addressing the branch's financial needs. Unless the department secures some form of additional funding for the program, reductions in current program services appear imminent, and the branch will not have the additional funds needed to complete recommended program improvements for safeguarding California's children from lead poisoning.

RECOMMENDATIONS

To ensure that the program fulfills the regulatory responsibilities of identifying and adequately caring for lead-poisoned children, the department should continue its efforts to do the following:

- Make sure that local programs submit all necessary follow-up information outlining the services provided to lead-poisoned children.

- Monitor local programs' activities to ascertain whether lead-poisoned children receive appropriate care. This should include a high-level review of all follow-up reports to make sure that they are complete. The process should also require someone with health expertise to evaluate in detail a representative sample of individual cases from local programs.

To collect data on where and to what extent lead poisoning is a problem and to ensure that children with elevated blood-lead levels are identified and treated, the department should continue its efforts to do the following:

- Adopt regulations requiring all laboratories to report all blood-lead test results and perform additional procedures as necessary to determine the prevalence of lead poisoning based on children's race, ethnicity, and enrollment in publicly funded programs.

- Finalize the testing and installation of the software allowing laboratories to electronically submit their results as quickly as possible and develop and disseminate blood-lead reporting procedures for the laboratories to follow.

To improve the effectiveness of its screening regulations and state plan, the department should continue its efforts to revise the regulations to include an enforcement component and to require all providers to document their reasons for not ordering blood-lead tests on children. In addition, the department should develop a plan to monitor and evaluate its screening regulations and statewide targeted screening policy.

To make sure that providers order blood-lead tests in accordance with California Code of Regulations, Title 17, the department should continue its efforts to identify and educate those individual providers that are not ordering blood-lead tests as required.

To improve the program's ability to adequately protect California's children from lead poisoning, the department should secure adequate funding and staffing to achieve program mandates and goals. ■

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CHAPTER 2

The Childhood Lead Poisoning Prevention Branch Has Improved Some of Its Outreach and Education Efforts, but Further Improvements Are Still Needed

CHAPTER SUMMARY

The Childhood Lead Poisoning Prevention Branch (branch) has made progress in improving some of its primary prevention efforts, designed to prevent lead poisoning from occurring in the first place through education, but it needs to make additional efforts to assist local childhood lead poisoning prevention programs (local programs) in reducing or eliminating identified sources of lead. Currently, to assist local programs in issuing orders to reduce or eliminate (abate) lead hazards, the branch conducts training on how to use existing lead hazard reduction laws and provides technical assistance on a case-by-case basis. However, the branch and local programs believe that current laws do not grant them the enforcement authority they need to effectively compel violators to reduce or eliminate lead hazards. As a result, the branch has drafted a proposal for legislation to grant local programs explicit authority to issue abatement orders and to allow the branch as well as local programs to enforce those orders. In addition, its proposal includes provisions for imposing administrative, civil, and criminal sanctions against those who violate state requirements designed to reduce lead exposure caused by unsafe renovations or removal of lead-based paint. However, the department is making additional revisions to the proposed legislation, and it does not yet know when it will complete this process.

The branch also has not yet finalized its statewide provider outreach plan although it started developing the plan in 1996. Completing this plan is important for ensuring coordinated statewide efforts to educate health care providers (providers) on the importance of evaluating and testing children for lead poisoning. Recently, the branch completed a draft plan and anticipates finalizing it by June 30, 2001.

The branch now requires local programs to evaluate the effectiveness of their outreach and education efforts. By identifying which outreach strategies achieve the best results and sharing this knowledge with local programs, the branch will be able to better assist local programs in meeting the ultimate goal of identifying more lead-poisoned children. Additionally, the branch completed its lead-safe schools curriculum to train school and day care facility staff on proper steps for identifying and abating lead hazards. As of February 2001, the branch had conducted training for more than half of the California school districts it targeted. However, the Legislature's one-time funding of these training sessions ends on June 30, 2001.

THE LACK OF EXPLICIT ENFORCEMENT AUTHORITY HAS LIMITED THE BRANCH IN ITS ABATEMENT EFFORTS

Although the branch has conducted numerous training sessions to educate local officials about ways to use existing laws to order and enforce the reduction or elimination of lead hazards, it has been unsuccessful in its efforts to have legislation enacted to strengthen statewide authority in these areas. As a result, local officials and the branch may be unable to adequately protect children from lead hazards.

Our 1999 audit found that local programs did not always ensure that sources of childhood lead poisoning were adequately abated and that cities and counties needed legal authority to compel abatement of existing lead hazards. We recommended that the Legislature grant cities and counties this authority. In the event that the Legislature did not grant this authority, we recommended that the branch assist local programs with issuing abatement orders. Although existing state law grants the department legal authority to order an abatement of public health nuisances, including lead hazards, it does not grant this authority to cities and counties. We also found that, to avoid losing federal funding it receives as a result of becoming an authorized lead program of the United States Environmental Protection Agency (USEPA), the branch needed to demonstrate that it has the legal authority to impose administrative, civil, and criminal sanctions against those individuals who violate state requirements designed to reduce lead exposure caused by unsafe renovations or removal of lead-based paint. Therefore, we recommended that the branch also pursue this authority.

Current laws lack an adequate enforcement component to compel violators to reduce or eliminate lead hazards.

The branch has been unsuccessful in its efforts to have legislation enacted to strengthen statewide authority to order and enforce the reduction or elimination of lead hazards.

In an effort to comply with the USEPA requirements, the branch drafted a legislative proposal in 1999 to implement a program allowing it to enforce its requirements for training of construction professionals who work with lead and accreditation of training programs as well as its lead-safe work practices. This proposal also would authorize local authorities, such as local programs and building and housing officials, to enforce these requirements. Unfortunately, the proposal was not ultimately introduced as legislation. Neither branch nor department staff could tell us why the proposal was not pursued. Meanwhile, the branch designed and began conducting training sessions to educate local authorities about ways to use the multitude of existing laws to order the abatement of lead hazards. As of February 2001, the branch has conducted more than 40 training sessions for local health jurisdictions.

Despite its training efforts, the branch believes that current laws lack an adequate enforcement component to compel violators to reduce or eliminate lead hazards once abatement orders have been issued. Additionally, the branch believes that local authorities do not have explicit authority to investigate properties with potential lead hazards and to compel safe abatement before a lead-poisoned child has been identified and associated with the property. Having this authority is important to ensure proper abatement of these potential serious health threats and to prevent children from future lead exposure.

In our 1999 audit, we reported that local programs were not always able to ensure that sources of children's lead poisoning were adequately reduced or eliminated because many believed they lacked specific legal authority to require violators to abate identified hazards. We reached this conclusion based upon a survey of 14 local programs in which staff from 11 of those stated that they lacked specific legal authority to compel property owners to reduce or eliminate lead-based paint and contaminated soil. During our 2001 audit, we contacted those 11 local programs once again and found that staff at 4 of the 7 that recently received training on how to use existing laws to order abatement still do not believe they have the authority to enforce these orders. At the other 3 programs, staff stated that they issue abatement orders infrequently but that they would generally use state housing laws that may require coordination with other enforcement officials as support. However, this coordination can be time-consuming and difficult to achieve.

Inadequate funding is often an obstacle for assuring lead hazards are reduced or eliminated.

In recognition of the need for additional training, the branch has begun developing a new enforcement training program and guidance document for local agencies. The branch expects to complete the guidance document by the end of May 2001 and to provide training to 50 local health jurisdictions from July through November 2001. Additionally, the branch once again drafted a proposal for legislation granting state and local authorities specific authority to order and enforce compliance with lead-safe work practices. The proposal would also allow these agencies to impose fines and penalties for noncompliance. However, this time the branch is also seeking the authority for state and local enforcement agencies to investigate, order, and enforce abatements regardless of whether a lead-poisoned child is identified in relation to the property. Presently, enforcement agencies do not have explicit authority to ascertain the presence of lead hazards nor to compel property owners and construction workers working with lead to comply with lead-safe work practices. The branch has also been told by local authorities that a lack of funding is often an obstacle for ensuring that abatement activities occur; therefore, it is also seeking enforcement funding to aid local programs in their efforts to order and enforce abatement activities. However, as of March 2001, the branch and its legal office found that the proposal needed further revision, and it does not yet know when the draft will be completed. According to the branch, without adequate ability to impose fines and penalties for violations and sufficient funding to support these efforts, local authorities are unable to effectively eliminate lead hazards and children are exposed to greater levels of lead and have an increased risk of suffering the effects of lead poisoning.

THE BRANCH'S STATEWIDE PROVIDER OUTREACH PLAN REMAINS INCOMPLETE

Although the branch began developing a statewide provider outreach plan in 1996, the plan remains incomplete. Completing and implementing this plan is important to ensure the effectiveness of statewide efforts and resources aimed at educating providers on the importance of evaluating and testing children for lead poisoning.

In our 1999 audit, we reported that the branch needed to take action to make its outreach efforts more effective. We reached this conclusion after reviewing the results of a 1996 survey commissioned by the branch, which revealed that, because

many physicians lacked vital information about lead poisoning, they were not convinced that it was a significant issue for their patients. Following the survey in 1996, the branch began drafting an outreach plan for providers; however, efforts to complete the plan were diverted due to staff turnover and other priorities. The branch told us in March 1999 that, to overcome these setbacks, it planned to contract with the Long Beach State University Foundation, which subcontracted with the American Academy of Pediatrics to complete the plan.

Some components of the branch's draft plan to educate health care providers lack needed implementation strategies and time lines.

During our April 1999 audit, the branch told us that it expected to complete its provider outreach plan within the next two years. As of March 2001, it has developed a draft of a plan, which its contractor is reviewing, and expects to finalize it by June 30, 2001. Although the plan is still being finalized, the branch has already tested and implemented some of the provisions. For example, to educate providers about its new screening regulations, the branch conducted seminars, published newsletters and articles, and mailed providers letters and health education materials. The draft includes several other strategies for educating providers and the public about the hazards of lead, screening requirements, and other available resources such as the local programs. The draft also includes a component for evaluating the effectiveness of its efforts. However, some components of the branch's provider outreach plan lack specific time lines and implementation strategies that it will need in order to evaluate whether its activities are on target or effective in reaching and educating providers. Completion of this plan, with implementation strategies and time lines, is important to ensure the coordination of statewide efforts to convince providers about the need to screen children for lead poisoning.

THE BRANCH NOW REQUIRES LOCAL PROGRAMS TO EVALUATE OUTREACH AND EDUCATION EFFORTS

The branch now requires local programs to evaluate the effectiveness of their outreach and education efforts in identifying more lead-poisoned children, and it also provides assistance to local programs in developing the proper tools to complete these efforts—additions we recommended in our 1999 report. Although it is too soon to tell whether these efforts are successful, evaluating the results of each local program's efforts will allow the branch to identify which outreach strategies achieve the best results and to share this knowledge with other local programs.

In our 1999 audit, we found that nearly 25 percent of the local program funding in fiscal year 1997-98 was used for outreach and education designed to identify more lead-poisoned children. Yet, despite this expenditure, the branch was unable to determine how many children were either tested for lead poisoning or found to have lead poisoning as a result of local programs' efforts, because it did not require them to evaluate their activities on the basis of children identified. Because the purpose of spending funds on outreach and education efforts is to identify lead-poisoned children, we recommended in our 1999 audit that the branch assist local programs in developing the proper tools for evaluating these activities.

Under its new contract with local programs, which began on July 1, 2000, the branch now requires them to demonstrate, through data, at least a 5 percent increase in the number of blood-lead tests ordered by selected providers in its health jurisdictions following an education session. The branch assists in developing outreach strategies by providing general instructions and technical assistance and by conducting reviews of semiannual progress reports that local programs submit to it. Because full implementation and evaluation of local programs' efforts are to occur over a two-year period ending June 30, 2002, the results of these efforts are still unknown. However, once the branch receives the results, it will be able to compare them to determine the most effective strategies for reaching the ultimate goal of increasing the number of blood-lead tests that providers order for high-risk children.

By June 30, 2002, local programs are required to demonstrate, through data, at least a 5 percent increase in the number of blood-lead tests ordered by selected providers.

THE BRANCH DEVELOPED A COMPREHENSIVE LEAD-SAFE SCHOOLS PROGRAM

A branch study completed in April 1998 found that 96 percent of a random sample of 200 schools, including newer schools and day care facilities, have lead-based paint and that 38 percent of these facilities have deteriorating paint. The study also showed that many schools had lead in their water, and some even had lead in the soil. In response to these conditions, the branch began developing a curriculum to properly educate school and day care staff on appropriate steps for reducing or eliminating lead hazards. However, at the time of our 1999 audit, the curriculum was incomplete; therefore, we recommended that the branch complete this curriculum so that it could begin the process of educating school staff.

As of February 2001, the branch had completed its lead-safe schools training for 498 of 881 targeted school districts.

The branch contracted with the Labor and Occupational Health Program (LOHP) of the University of California, Berkeley, to prepare the lead-safe schools training materials and to train maintenance and operations staff in public schools and school day care centers on the proper steps for identifying and abating lead hazards. In late 1999 LOHP completed the training curriculum and began conducting training at school districts targeted for having elementary schools. The training materials include a trainer's manual, worker's booklet, video, and copies of visual transparencies. As of February 2001, 498 of the 881 targeted school districts had participated in the training. Although the branch plans another 10 training sessions before the contract with LOHP ends on June 30, 2001, it is unlikely that all of the remaining targeted districts will receive this training. The branch sent a copy of its lead-safe schools guide, which outlines the proper steps for safely controlling lead-hazards, to every school district in California. The guide, however, is not an adequate substitute for training. In addition, ongoing training for school districts is needed due to district staff turnover.

As noted above, the branch's contract with LOHP expires in June 2001, and, according to the chief of the Lead Hazard Reduction Section, the branch may not have a funding source to continue the program. As of March 2001 the branch is awaiting the results of legislative bills that propose to continue the lead-safe schools training program before it decides whether it will need to pursue additional funding. We believe that continuing this program is important to ensure that the State minimizes the danger of accidental lead poisoning of children in its schools.

RECOMMENDATIONS

To ensure that the program fulfills its responsibilities of reducing or eliminating the hazards of lead poisoning and educating the health care community about these hazards, the branch should continue its efforts to do the following:

- Seek legislation granting the department, cities, and counties the authority to investigate properties with suspected lead hazards and to order and enforce the abatement of lead hazards against property owners.

- Assist local authorities with issuing and enforcing abatement orders by continuing its training and education efforts if the Legislature does not grant this authority to the locals.

- Fulfill its enforcement responsibilities for ensuring that program requirements designed to reduce lead exposure caused by unsafe renovations or removal of lead-based paint are met by seeking legislation granting enforcement authority that will allow both the department and local authorities to impose administrative, civil, and criminal sanctions.

To gain compliance from the health care community on its approach for requiring blood-lead testing, the department should continue its efforts in finalizing and implementing a comprehensive statewide provider outreach plan complete with time lines and implementation strategies.

To support the success of local programs' outreach and education efforts based on the primary objective of identifying more lead-poisoned children, the branch should continue its efforts to assist in refining the tools that are currently in place for evaluating the effectiveness of these efforts.

To minimize the danger of lead poisoning of children at school, the branch should pursue the funding needed to complete its lead-safe training program in all targeted school districts and to provide follow-up training to these schools as needed.

We conducted this review under the authority vested in the California State Auditor by Section 8543 et seq. of the California Government Code and according to generally accepted government auditing standards. We limited our review to those areas specified in the scope section of this report.

Respectfully submitted,

ELAINE M. HOWLE
State Auditor

Date: May 1, 2001

Staff: Reed M. McDermott, CPA
Tyler Covey, CPA, CMA
Anna K. Escuadro
Jeana Kenyon, CMA, CFM

APPENDIX

Summary of the Department's Progress Toward Implementing the Recommendations From the Bureau's 1999 Audit

Recommendations	Branch Progress	Branch Plans
Adopt regulations requiring laboratories to report all blood-lead test results, finalize the testing and installation of the software allowing them to electronically submit their results, and develop and disseminate blood-lead reporting procedures for them to follow.	*Not yet complete.* Proposed laboratory reporting regulations were rejected by the Department of Finance because the Childhood Lead Poisoning Prevention Branch (branch) lacked adequate funding for the staff required to handle the increased workload. The branch has not yet finalized the infrastructure needed to implement these proposed regulations.	The branch is continuing to pursue the funding needed to adequately administer and support the proposed regulations. It seeks to have the regulations approved by July 1, 2001. It is also finalizing strategies to make it easier to bring laboratories on-line, to better handle paper reporting, and to upgrade its database capacity to handle the expected increase in reporting.
Take immediate action to identify and educate those health care providers (providers) who are not ordering blood-lead tests as required.	*Not yet complete.* The branch conducted physician seminars, sent letters to 27,500 providers, published newsletters and articles, and developed other educational materials. It has yet to develop a means of identifying those providers who are not screening as required.	The branch plans to continue conducting physician seminars and is developing other strategies to educate the health care community about the importance of screening. The branch is working with the Child Health and Disability Prevention (CHDP) and Medi-Cal programs to obtain data on provider screening rates.
Adopt standard-of-care regulations as previously directed by the Legislature.	*Implemented.* The emergency regulations went into effect October 10, 2000. However, as a result of a lawsuit, a judge ordered the branch to revise the regulations to include an enforcement component and a requirement for doctors to justify reasons for not performing a blood-lead test.	In response to the legal action, the branch is working with the plaintiffs to revise its regulations and include accountability and enforcement components.
Continue its recent efforts in developing a state screening plan in accordance with guidance from the United States Centers for Disease Control and Prevention.	*Implemented.* The statewide targeted screening policy was developed and distributed to all local childhood lead poisoning prevention programs (local programs) in July 1999. However, the branch does not yet have a process to monitor, evaluate, or enforce its policy.	The branch is working with CHDP and Medi-Cal to obtain the information needed to monitor whether providers are testing children in these programs. It also plans to develop an evaluation component once the proposed laboratory reporting regulations are in place.
Continue its efforts in developing a comprehensive statewide provider outreach plan to gain consensus and support from the health care community.	*Not yet complete.* The branch has drafted a statewide provider outreach and education plan. The American Academy of Pediatrics is reviewing it.	The branch anticipates finalizing the plan by June 30, 2001.
Ensure local programs submit all necessary follow-up information outlining the services provided to lead-poisoned children.	*Not yet complete.* The branch developed and began implementing in March 2001 a plan designed to ensure all local programs are submitting all required follow-up information.	On a quarterly basis, the branch plans to send local programs a list of those cases for which it is missing follow-up information.

(Continued on next page)

Recommendations	Branch Progress	Branch Plans
Monitor local programs' activities to ensure lead-poisoned children receive appropriate care. This should entail a high-level review of all follow-up reports to ensure their completeness and a more detailed assessment of the care given for a representative sample of cases.	*Not yet complete.* In March 2001 the branch developed a plan to conduct both high-level and detailed reviews of the follow-up information submitted to it by local programs.	Starting in March 2001 the branch will review monthly all follow-up forms for completeness and review a sample in detail.
Ensure that homeowners and property owners properly reduce or eliminate lead hazards identified as a source of a child's lead poisoning by assisting the local programs with issuing abatement orders if the Legislature does not grant this authority to them.	*Not yet complete.* The branch conducts training for local programs and officials on the use of lead hazard reduction laws and provides technical assistance on a case-by-case basis. The branch is also developing a new enforcement training program and guidance for local programs.	Upon completion of revisions, the branch plans to seek approval of its proposed legislation to explicitly grant local programs the authority to issue and enforce abatement orders. The branch plans to conduct enforcement training sessions from July through November 2001.
Seek legislation granting enforcement authority that will allow the branch to impose administrative, civil, and criminal sanctions against those who violate state requirements governing activities to reduce or eliminate lead hazards.	*Not yet complete.* To date, the branch has been unsuccessful in gaining approval of legislation to grant this authority.	The branch is exploring the possibility of proposing new legislation to grant it and local programs the authority to impose fines and penalties for noncompliance with lead-safe work practices and the State's requirements for training and accreditation.
Complete the training curriculum for eliminating or reducing lead hazards in California's school and day care facilities so that children do not remain at risk for lead poisoning.	*Implemented.* The branch has completed this training curriculum and has performed training sessions for more than half of the targeted school districts in California.	The branch has another 10 training sessions scheduled through June 30, 2001.
Require local programs to evaluate the effectiveness of their outreach and education efforts and assist them in developing the proper tools for evaluating the effectiveness of these efforts.	*Implemented.* The branch now requires local programs to evaluate the effectiveness of their outreach and education efforts. Because full implementation and evaluation of these efforts is to occur over a two-year period ending June 30, 2002, the results are still unknown.	Local programs are required to report their progress to the branch semiannually. Through these reports, the branch will determine which outreach strategies achieve the best results and will share this knowledge with other local programs to better improve provider outreach and education.

Agency's comments provided as text only.

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1600 Ninth Street, Room 460
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Telephone (916) 654-3454

April 20, 2001

Elaine M. Howle
State Auditor
Bureau of State Audits
555 Capitol Mall, Suite 300
Sacramento, CA 95814

Dear Ms. Howle:

Thank you for forwarding for my review and comment a draft copy of the Bureau of State Audits' report titled, "Department of Health Services: Additional Improvements Are Needed to Ensure Children Are Adequately Protected From Lead Poisoning." I am forwarding to you the Department of Health Services' (DHS) response to the review findings and recommendations, and understand that DHS has begun taking steps to address the issues raised in the Bureau's report.

Thank you once again for sharing the draft copy of your findings and recommendations. If you require further information concerning DHS' Childhood Lead Poisoning Prevention Program, please do not hesitate to contact me directly. You may also contact Diana Bontá, the Director for the Department of Health Services, at (916) 657-1425 to assist you.

Sincerely,

(Signed by: Grantland Johnson)

Grantland Johnson
Secretary
California Health & Human Services Agency

DEPARTMENT OF HEALTH SERVICES
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SACRAMENTO, CA 94234-7320
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April 20, 2001

Ms. Elaine M. Howle
State Auditor
Bureau of State Audits
555 Capitol Mall, Suite 300
Sacramento, CA 95814

Dear Ms. Howle:

Thank you for the opportunity to comment on the draft of your recent audit entitled ”Department of Health Services: Additional Improvements Are Needed to Ensure Children Are Adequately Protected From Lead Poisoning.” The Department agrees with the factual findings of the audit and will continue taking action to implement the Auditor’s recommendations as available resources permit. The Department recognizes the importance of the childhood lead poisoning prevention program to the health of Californians, and is fully committed to addressing the challenges facing the program.

The Auditor’s report recommends that the Department identify those providers who are not testing all high risk children under their care and target these providers for special education and discipline. The Department understands the spirit of the Auditor’s recommendation. Increasing provider compliance with screening protocols is of key importance to the program meeting its goals, and is an area we have taken steps to improve. However, there are significant operational barriers to identifying individual doctors with low screening rates that are not discussed in the Auditor’s report. There are 27,000 providers seeing these children. Provider-specific monitoring would require determining how many children each of these providers saw, and how many were screened. The Department will continue sending periodic reminders of the lead screening requirements to all new and continuing providers of care to small children. Additionally, over the next 60 days, the Department will develop approaches to identify and educate non-compliant providers in managed care and in the fee-for-service sectors.

We expect the identification and education of recalcitrant providers to enhance the effectiveness of the Department’s outreach efforts. If you have additional questions or concerns, please feel free to contact Dr. Kevin Reilly, Acting Deputy Director for Prevention Services, at (916) 657-1493. Again, thank you for the opportunity to comment.

Sincerely,

(Signed by: Diana M. Bontá, R.N., Dr. P.H.)

Diana M. Bontá, R.N., Dr.P.H.
Director

cc: Members of the Legislature
Office of the Lieutenant Governor
Milton Marks Commission on California State
Government Organization and Economy
Department of Finance
Attorney General
State Controller
State Treasurer
Legislative Analyst
Senate Office of Research
California Research Bureau
Capitol Press